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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,911	11/08/2000	Etsushi Yajima	09792909-4681	2666

7590 12/17/2002

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EXAMINER

MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 12/17/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/708,911

Applicant(s)

YAJIMA ET AL.

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 14 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-10 is/are allowed.
- 6) ☐ Claim(s) 11, 14 and 16-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Interview Summary	Application No.	Applicant(s)	
	09/708,911	YAJIMA ET AL.	
	Examiner	Art Unit	
	Julian Mercado	1745	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Julian Mercado. (3) _____
 (2) Christopher Rauch. (4) _____

Date of Interview: December 10, 13 .

Type: a) ☒ Telephonic b) ☐ Video Conference
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
 If Yes, brief description: _____ .

Claim(s) discussed: pending .

Identification of prior art discussed: Gies .

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The examiner telephoned Applicant's representative, Mr. Christopher Rauch, with a proposal to place the application in condition for allowance. Mr. Rauch proposed an alternative amendment to the claims which resulted in no agreement being made .

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

i) ☒ It is not necessary for applicant to provide a separate record of the substance of the interview(if box is checked).

Unless the paragraph above has been checked, THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

 Examiner's signature, if required

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DETAILED ACTION

Remarks

This Office Action is responsive to Applicant's amendment filed October 8, 2002.

The rejection of claims 23 and 24 under 35 U.S.C. 112, second paragraph has been withdrawn.

Claim Rejections - 35 USC § 102 and 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 11, 14 and 16-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gies et al.

The above rejections have been discussed in detail in the previous Office Action and are maintained for the reasons of record and for the additional reasons to follow. Applicant appears to have incorporated the limitations of claim 15 (now canceled) into independent claim 11 while also, in an attempt to differentiate from the prior art, omitting previously claimed Markush group members polyacrylonitrile, polytetrafluoroethylene and polystyrene. However, upon further review, Gies is deemed to teach a matrix polymer of polyvinylidene fluoride and/or polyethylene oxide, *inter alia*, insofar as these two polymers specifically read on the present Markush group claim. (col. 3 line 49-56)

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lyte active species. Accordingly, preferred gelling polymers are selected from the group of materials consisting of 30 polyvinylidene fluoride (PVDF), polyurethane, polyethylene oxide, polyacrylonitrile, polymethylmethacrylate, polyacrylamide, polyvinyl acetate, polyvinylpyrrolidone, polytetraethylene glycol diacrylate, copolymers of any of the foregoing, and combinations thereof. In one particularly preferred embodiment, the gelling polymer is PVDF. The 35

Applicant's arguments submitted with the present amendment have been fully considered, however they are not persuasive. Applicant's understanding of Gies as acknowledged in the response is that the polymers disclosed include polyethylene, polypropylene, polytetrafluoroethylene, polystyrene, polyethyleneterephthalate, nylon and combinations thereof. However, while the examiner concedes that these polymers are referred to by the patentees as "host matrix polymers", the patentees further teach that either polyvinylidene fluoride or polyethylene (referred to as gelling polymers) is incorporated within its structure. (col. 3 line 12-17)

at least two polymers. The polymeric support structure includes a non woven polymeric host matrix having a gelling polymer introduced therewith, as well as an electrolyte active species dispersed throughout. The two polymers 15

In a first basis, this ground of rejection is maintained as Applicant's claim does not preclude a gelling polymer from functioning as part of a multi-polymer system such as in a gelling polymer being incorporated within the structure of a host matrix polymer. In its execution, the patentee's invention discloses that the two-polymer system functions as a cohesive "polymeric support structure", i.e. a matrix polymer, albeit of plural polymers. (col. 3 line 12-13)

In a second basis, this ground of rejection is maintained in that an allegedly distinct matrix polymer notwithstanding, the gelling polymer in Gies is specifically disclosed to "expand or swell on absorption" of "the electrolyte active species". (col. 3 line 44-46)

The gelling polymer is, conversely, adapted to absorb the electrolyte active species, and hence expand or swell on 45 absorption. The gelling polymer may be either a powdered

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Thus, Applicant's claimed *matrix* polymer is not considered to be distinct from the *gelling* polymer in Gies [emphasis added] in that the claimed matrix polymer is similarly dissolved in the electrolyte solution. (see, for example, specification, page 12) Additionally, much like in Gies's disclosure, Applicant's claim recites "a swelling solvent" as part of the electrolyte composition. (claim 11, line 21) This interpretation of the gelling polymer in Gies functioning as the instant matrix polymer is deemed consistent with Applicant's entitlement to be his or her own lexicographer with the use of the term "matrix polymer" as defined in the specification. That is, the gelling polymer in Gies is the same as the matrix polymer of Applicant's claimed invention.

Claims 23 and 24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gies et al. as applied to claims 11, 14 and 16-22 above, in view of Sun.

The teachings of Gies are discussed above.

Sun as discussed in the previous Office Action is relied upon to teach a "jelly roll" configuration, i.e. wherein the electrodes are rolled in a longitudinal direction, having an insulation material as an exterior cover and a positive and negative electrode lead protruding therethrough. The skilled artisan would have found obvious to employ the electrode of Gies as part of such a battery structure for reasons such as employing the flexibility and mechanical integrity of Gies's electrode within a conventional battery configuration. (Sun, col. 7 line 66 et seq.)

Allowable Subject Matter

Applicant is reminded that claims 1-10 are allowable for the reasons set forth in the previous Office Action.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the

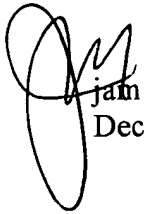
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organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to be "Jain", written over the typed name.

December 15, 2002

A handwritten signature in black ink, appearing to be "Patrick Ryan", written above the typed name.

Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700